

Amendments to the Specification:

The applicant has added the generic terminology before each of trademarks, or other proper names or terms of art, noted in the specification, and made certain cosmetic changes to the application. As such, no substantive changes or additions are embodied, and the amendments do not add any new matter to this application.

Please substitute the following amended title for the title of the application:

~~Express Card~~ Multiple Format Interface Adapter for Small Storage Media.

Please substitute the following amended paragraph for paragraph 0001:

[0001] The invention relates to an adapter device for small storage media, and more particularly to a multiple format interface adapter for small storage media~~Express Card interface adapter for small storage media~~.

Please substitute the following amended paragraph for paragraph 0006:

[0006] It is therefore an object of the invention to provide a multiple format interface adapter~~Express Card interface adapter~~, configured to accommodate storage media of Compact Flash (CF) card (~~CF~~), Memory Stick (MS), Secure Disk (SD), Multi-Media Cards (MMC), Smart Media (SM), xD with a system end.

Please substitute the following amended paragraph for paragraph 0007:

[0007] In one embodiment, the multiple format interface adapter for small storage media~~Express Card interface adapter~~ comprises a casing, a double-configuration connector interface, a reversed U-shape slot and a circuit board. The double-configuration connector interface is mounted at a front of the casing to insert in and connect to a system end. The reversed U-shape

slot has a Compact Flash (CF)-standard interface and formed at a rear end of the adapter by guide tracks that are located at sides of the Compact Flash (CF)-standard interface. The circuit board is arranged between the double-configuration connector interface and the Compact Flash (CF)-standard interface. A signal converter control chip connected between the double-configuration connector interface and the Compact Flash (CF)-standard interface, wherein the signal converter control chip is configured to control signal conversion and signal transmission between the system end and the storage medium.

Please substitute the following amended paragraph for paragraph 0008:

[0008] The Compact Flash (CF)-standard interface includes at least one Compact Flash (CF) card detect pin. The double-configuration connector interface includes a card insertion detect pin to detect the insertion of any Compact Flash (CF)-standard storage media. The system end provides a work voltage according to an enable signal transmitted from the double-configuration connector interface to allow the adapter transmitting different types of electronic signal for controlling the data reading/writing operation.

Please substitute the following amended paragraph for paragraph 0010:

[0010] According to other variation embodiments, the storage media includes small memory cards such as Memory Stick (MS), Secure Digital (SD)/ Multi-Media Cards(MMC), Smart Media (SM), or xD.

Please substitute the following amended paragraph for paragraph 0012:

[0012] FIG. 1 is an exploded view of a multiple format interface adapter for small storage media ~~Express Card interface adapter compatible with~~ small storage media;

Please substitute the following amended paragraph for paragraph 0016:

[0016] FIG. 5 is an exploded view of a multiple format interface adapter for small storage media ~~Express Card interface adapter compatible with~~ small storage media according to another variant embodiment of the invention;

Please substitute the following amended paragraph for paragraph 0020:

[0020] Referring to FIG. 1, the implementation of a multiple format interface adapter for small storage media ~~Express Card interface adapter~~ is exemplary mounted in a casing structure. The casing structure includes the assembly of first and second case bodies 10, 11.

Please substitute the following amended paragraph for paragraph 0021:

[0021] In the illustrated embodiment, the multiple format interface adapter for small storage media ~~Express Card interface adapter~~ is exemplary suitable for the specification of Compact Flash (“CF”) Card. The multiple format interface adapter for small storage media ~~Express Card interface adapter~~ includes an assembly of first and second case bodies 10, 11, a double-configuration connector interface 14, a Compact Flash (CF)-standard interface 16, a circuit board 18, and IDE converter control chip 182 connected on the circuit board 18.

Please substitute the following amended paragraph for paragraph 0022:

[0022] The double-configuration connector interface 14 is coupled with a system end at a front of the case bodies 10, 11. A rear of the case bodies 10, 11 respectively forms a reversed U-shape 13 with side guide tracks 12, at a side of which is placed the Compact Flash (CF)-standard interface 16. The Compact Flash (CF)-standard interface 16 is mounted at an end of the guide tracks 12 adjacent to the double-configuration connector interface 14. A Compact Flash (CF)

storage medium is inserted along the guide tracks 12 to connect to the Compact Flash (CF)-standard interface 16.

Please substitute the following amended paragraph for paragraph 0023:

[0023] The double-configuration connector interface 14 and the Compact Flash (CF)-standard interface 16 are connected each other via a circuitry carried by the circuit board 18. The circuit board 18 includes the connection of the IDE converter control chip 182 compatible with Compact Flash (CF) format devices. The chip 182 is operable to convert IDE standard signals to USB standard signals between an external system terminal and the Compact Flash (CF) format storage medium. A Compact Flash (CF) card is compatible with three operating modes, i.e. a memory mode, I/O mode, and a true IDE mode. In the illustrated embodiment, the Compact Flash (CF) storage medium is used as an external hard disk vis-à-vis the system end. The Compact Flash (CF) format storage medium in this embodiment therefore has pins that correspond to the true IDE mode of the IDE interface, being implemented as control interface for signal transmission.

Please substitute the following amended paragraph for paragraph 0024:

[0024] As shown in FIG. 2, the Compact Flash (CF)-standard storage medium can be a removable Compact Flash (CF) memory card or a micro-drive 20. As shown in FIG. 3, the Compact Flash (CF)-standard storage medium can alternatively be a fixed small hard disk 30.

Please substitute the following amended paragraph for paragraph 0025:

[0025] In the embodiment of FIG. 4, the double-configuration connector interface 14 is specifically compatible with Express Cards, the Compact Flash (CF)-standard interface 16 is

specifically compatible with Compact Flash (CF) storage media, and the IDE converter control chip 182 operates as a signal control core.

Please substitute the following amended paragraph for paragraph 0026:

[0026] The double-configuration connector interface 14 includes two signal transmission formats, which can be a PCI Express interface and a USB interface. According to the design requirement, either the PCI Express interface or the USB interface can be implemented as an operating interface. In the illustrated embodiment, the double-configuration connector interface 14 exemplary operates as a USB interface.

Please substitute the following amended paragraph for paragraph 0027:

[0027] The Compact Flash (CF)-standard interface 16 includes a Compact Flash (CF) card detect pins 25 (nCD2), 26 (nCD1). The double-configuration connector interface 14 includes a card insertion detect pin 4 (CPUSB# which is belonged to USB interface, wherein “#” means a “Low-Active” pin) connected to the Compact Flash (CF) card detect pins 25, 26 for detecting the insertion of a Compact Flash (CF) format storage medium. The pins 25, 26, 4 are Low-Active pins, i.e. they are at low potential when a Compact Flash (CF)-standard storage medium is connected, and the card insertion detect pin 4 (CPUSB#) provides a card insertion-enable signal to the system end. The double-configuration connector interface 14 also includes power terminals 14, 15. When the card insertion detect pin 4 (CPUSB#) is in an enabled status, the system end transmits an operating voltage to the adapter so that its internal electronic components can start data reading required for the system.

Please substitute the following amended paragraph for paragraph 0029:

[0029] Within the multiple format interface adapter for small storage media~~Express Card interface adapter~~, signal transmission is performed in parallel. The Compact Flash (CF)-standard interface 16 includes address pins (A00~A02), data transmission pins (D00~D15), and control pins (RESET, nIOWR, nIORD, nWAIT, IREQ, nCE1, nCE2, nSPKR). The IDE converter control chip 182 includes address pins (DA0~DA2), data transmission pins DD0~DD15), and control pins (RESET-, DIOW-, DIOR-, IORDY, INTRQ, CS0-, CS1-, DASP-).

Please substitute the following amended paragraph for paragraph 0030:

[0030] With the foregoing design, the Express Card interface module can be implemented as a signal converter for Compact Flash (CF) format storage media. Presently, popular small storage media include X₂D, SM, SD, MMC and MS series small memory cards. The following description exemplary implements an Express Card interface module as a multi-card adapter compatible with the aforementioned memory cards.

Please substitute the following amended paragraph for paragraph 0031:

[0031] FIG. 5 is a schematic view of a multiple format interface adapter for small storage media~~an Express Card interface adapter compatible with~~ a plurality of memory cards according to an embodiment of the invention. The multiple format interface adapter for small storage media~~Express Card interface adapter~~ includes the assembly of a casing 50, a double-configuration connector interface 54, a signal converter 56, a circuit board 58 and a multi-card reader control chip 582 connected on the circuit board 58.

Please substitute the following amended paragraph for paragraph 0032:

[0032] The double-configuration connector interface 54 is assembled at a front of the casing 50, while a slot 502 is formed at a rear of the casing 50 for insertion of small memory

cards. The signal converter 56 is placed inside the casing 50 at a location corresponding to the area of the slot 502. The signal converter 56 can receive the placement of a small memory card through which signal transmission is performed via the double-configuration connector interface 54 with the system end. The signal converter 56 can be divided into three structural parts, which include an upper layer for configuring Smart Media (SM)/xD contact pins (not shown), an accommodating space 562 for receiving the placement of the memory card, and a lower layer for configuring Memory Stick (MS) type memory card contact pins 566 and Secure Digital (SD)/ Multi-Media Cards(MMC) memory card contact pins 564. Smart Media (SM)/xD contact pins and Memory Stick (MS) and Secure Digital (SD)/ Multi-Media Cards(MMC) contact pins 566, 564 can be interchangeably placed on the upper and lower layers. If there is a sufficient space, all the connection contact pins can be also placed on a same level to obtain a thinner signal converter 56.

Please substitute the following amended paragraph for paragraph 0035:

[0035] FIG. 7 is a schematic view of the pins layout of the interface embedded in the adapter shown in FIG. 5. The receivable memory cards can include three types, i.e. SM/xD standard, Secure Digital (SD)/ Multi-Media Cards(MMC) standard, and Memory Stick (MS)-series (such as MS, MS_PRO, MS_DUO) standard. Accordingly, the transmission interface of the signal converter 56 can be respectively divided into a transmission interface (A) compatible with Smart Media (SM)/xD standard, a transmission interface (B) compatible with Memory Stick (MS) series, and a transmission interface (C) compatible with Secure Digital (SD)/ Multi-Media Cards(MMC) standard. The transmission interfaces (A), (B), (C) have data transmission pins and control pins respectively corresponding to each type of memory card. The multi-card

reader control chip 582 and the signal converter 56 are connected each other in parallel and have corresponding connection pins defined as follows.

Please substitute the following amended paragraph for paragraph 0038:

[0038] Referring to FIG. 7-8, the double-configuration connector interface 54 has a card insertion detect pin 4 (CPUSB#) for detecting the connection of a memory card. The signal converter 56 has a card detect pin 23 (CD_SW1) corresponding to a first type of memory card (for example Smart Media (SM)/xD), a second card detect pin 6 (INS) corresponding to a second type of memory card (for example Memory Stick (MS)), and a third card detect pin 10 (CD_SW#) corresponding to a third type of memory card (for example Secure Digital (SD)/Multi-Media Cards(MMC)). The multi-card reader control chip 582 has a first detect pin 22 (SM_CD_SW#), a second detect pin 30 (MS_INS#) and a third detect pin 37 (SD_CD_SW#), through which the multi-card reader control chip 582 detects the connection of memory card.